

Appendix D
CAS Inspection Report

COMPREHENSIVE ASBESTOS SURVEY
INSPECTION REPORT
YERINGTON MINE SITE

Prepared for
Atlantic Richfield Company
4 Centerpointe Drive
La Palma, CA 90623

November 17, 2009

Brown and Caldwell Project #: 136742.010



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EXECUTIVE SUMMARY

Brown and Caldwell performed a comprehensive asbestos survey (CAS) in September 2009 of the inactive Anaconda Copper Mine site (Site) located at 102 Burch Drive, Yerington, Nevada. The CAS was performed on behalf of Atlantic Richfield (ARC), the responsible party for the Site under the regulatory authority of the U.S. Environmental Protection Agency - Region 9 (EPA). The purpose of the survey was to identify asbestos-containing concrete pipe and asphaltic wrapped metal pipe (ACM) used for process solution during Site operations from 1953 through 1978. The CAS was performed to support a transite pipe removal action to be performed by ARC.

Comprehensive Asbestos Survey

Brown and Caldwell's CAS was performed in general accordance with the guidelines set forth in the American Society for Testing and Materials (ASTM) International Standard E 2356-04, Standard Practice for Comprehensive Building Asbestos Surveys. This CAS has been designed to meet requirements for demolition of buildings and associated infrastructures under the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 Code of Federal Regulations (CFR) § 61.140 et seq.

Brown and Caldwell identified seven homogeneous areas (HA) on the site, resulting in the collection of 60 bulk samples. The samples were analyzed by Asbestos TEM Laboratories, Inc., Sparks, Nevada an asbestos testing laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP). These laboratory results indicated that the pipe located in all HAs were found to be Category II (CAT II) non-friable ACM.

Conclusions and Recommendations

According to the results of the laboratory analyses, the cementitious pipe and asphaltic wrapped metal pipe located on the Site contains greater than one percent (1%) asbestos. Positive identification of ACM means that the quantity of asbestos in the samples were detected by the laboratory in concentrations exceeding the NESHAP regulatory threshold of greater than one percent asbestos by weight. Based on the CAS, the following conclusions can be reached:

- The cement pipe on site is classified as CAT II non-friable ACM that may become regulated ACM (RACM) when demolition actions are applied to the materials. The disturbance of these materials during demolition is regulated under the NESHAP regulation and by OSHA.
- The asphaltic coated metal pipe on site is classified as CAT II non-friable ACM that may become regulated ACM (RACM) when demolition actions are applied to the materials. The disturbance of this material during demolition is be regulated under the NESHAP regulation and by OSHA.

Based on the CAS findings and conclusions reached, the following recommendations are made for the removal action:

- A NESHAP notification form should be completed for the abatement activities. The Asbestos Abatement Project Notification Form (NESHAP form) should be completed by the abatement contractor and submitted to Nevada Division of Industrial Relations, Occupational Safety and Health Administration, Northern District Office in accordance with the regulatory requirements. The ACM is to be handled, removed and disposed in accordance with § 61.140 et seq. during demolition.

- The disturbance of ACM by demolition and/or abatement activities is classified by OSHA as Class II asbestos work and will require compliance with applicable sections of § 29 CFR 1926.1101 (certified competent person and asbestos worker required).
- CAT II non-friable that has become friable in the demolition actions on the site be sprayed with amended water and an encapsulant prior to transportation to the proposed onsite landfill. Broken pieces of pipe should be sprayed with amended water, encapsulated and placed in bags prior to transportation to the proposed onsite landfill. A licensed asbestos abatement contractor should be retained to perform the abatement of the ACM in accordance with § 61.140 et seq. and § 29 CFR 1926.1101 et seq.
- A Negative Exposure Assessment to assess the release of asbestos fibers during abatement should be conducted by a Certified Industrial Hygienist

1. SCOPE OF WORK AND LIMITATIONS

1.1 Scope of Work

Atlantic Richfield (ARC) retained Brown and Caldwell to perform a comprehensive asbestos survey (CAS) of the Yerington Mine Site (Site) located near Yerington, Nevada. The purpose of the CAS was to identify asbestos containing materials (ACMs) in preparation for an upcoming removal action at the Site required by the U.S. Environmental Protection Agency (EPA). The CAS was performed in accordance with the Asbestos Hazard Emergency Response Act (AHERA), 40 Code of Federal Regulations [CFR] § 763 certified building inspectors as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR § 61.140 et seq. The NESHAP regulation requires a thorough inspection for the presence of asbestos, including Category I (CAT I) and Category II (CAT II) non-friable asbestos-containing material (ACM) § 61.145(a).

The types of materials evaluated during the CAS included cement pipe used in the transmission of process water during the time when the mine was operational, and metal pipe wrapped with an asphaltic coating impregnated with fibrous material. Representative bulk samples were collected from homogeneous areas (HA) identified by Brown and Caldwell's inspector as suspect ACM.

1.2 Limitations

This CAS report has been prepared in accordance with the standards of the environmental consulting industry at the time the services were performed, and was performed for the sole purpose of assisting in the evaluation of ACMs associated with the Site. This CAS report is governed by the specific scope of work authorized by the Client and not intended to be relied upon by any other party. The findings presented herein are based upon observations of Site conditions on the dates of the inspection, and should not be assumed to apply to conditions on the Site subsequent to the inspection.

The findings of the CAS, as represented within this report, must be viewed in recognition of certain limiting conditions. The scope of work commissioned for this project does not represent an exhaustive study, but rather a reasonable investigation, consistent with good commercial practice, in general accordance with ASTM Practice E 2356-04 for asbestos. This CAS report makes no representation that environmental contamination does not exist at this Site beyond that described in this report. The CAS process is not intended to provide a guarantee regarding the presence or absence of ACM at the Site. The findings and conclusions of this assessment are limited by the following factors:

1. Brown and Caldwell conducted sampling of accessible cement and metal pipe in seven homogeneous areas in order to ascertain whether ACM was present in the cement pipe on site. However, due to safety considerations such as buried pipe or inaccessible areas, it was not possible to inspect all ACM on the Site. Consequently, there is a possibility that suspect materials may exist in a few areas not observed during the assessment. If suspect materials are identified during all future remedial activities that were not sampled during this CAS, these materials must be either assumed to be ACM or sampled to determine their asbestos content prior to completion of abatement activities. This CAS report identifies where such limitations are material to the conclusions of the assessment.
2. The quantity estimates were based on the assessment of visible materials only and may not be inclusive of materials that were inaccessible at the time of the survey. All quantity estimates should be verified by a licensed asbestos abatement contractor for the purposes of the NESHAP notification requirements.

2. SITE INFORMATION

2.1 Site Description

The Site is an inactive copper mine located at 102 Burch Drive, Yerington, Nevada (Figures 1-1 and 1-2 of the Transite Pipe Removal Action Plan). Seven HAs were evaluated and sampled during this survey and are identified on the accompanying Homogeneous Areas Map (Figures 2-1 through 2-5 of the Transite Pipe Removal Action Plan). For the purposes of this report, each homogeneous area was designated as HA-1 through HA-7 for identification purposes as shown in Figure 2-1. Section 4.1 provides a brief description of the types of the suspect material observed throughout the site that were designated as HAs.

2.2 Previous Asbestos Reports

Brown and Caldwell were not provided any as-built drawings for the site. Additionally, no previous comprehensive asbestos surveys were discovered or provided.

3. SAMPLING METHODS AND ANALYTICAL METHODOLOGY

3.1 Site Inspection

The CAS was conducted September 27-28, 2009, by Brown and Caldwell's USEPA Accredited Inspector Roe Souther (Inspector No. E2918), State of Nevada Asbestos Abatement Consultant No. IJM1489. Documentation of accreditation certifications are provided in Attachments D-1 and D-2. The inspector conducted visual inspections of the site to identify HAs, which are areas of material that are uniform in color, texture and appearance. Quantities of transite pipe and other ACM within each HA were estimated to determine the appropriate number of samples to be collected from each material type. Pursuant to NESHAP, all building materials except wood, metal, and glass are assumed to be ACMs unless analytical data indicate otherwise. Therefore, the suspect building materials observed on site were sampled and analyzed to confirm the presence or absence of asbestos.

Small quantities of each material were collected in a manner to reduce the amount of damage to the materials. However, adequate quantities were removed as needed for analysis. Additionally, any suspect materials that were not sampled because they were not readily accessible were assumed to be ACM and noted as such in this report. During the CAS, Brown and Caldwell confirmed the existing of seven HAs on the Site.

3.2 Asbestos Sampling Methods

A minimum of three samples per HA were collected, unless only a small quantity of material was available for sampling, resulting in a total of fifty-nine bulk samples collected from the Site for laboratory asbestos analysis. The identification and description of each collected sample is provided in Section 4.2. The samples were collected in general accordance with: 1) 40 CFR Part 63, Subpart E; and 2) guidelines set forth in the American Society for Testing and Materials (ASTM) International Standard E 2356-04, *Standard Practice for Comprehensive Building Asbestos Surveys*. Samples were obtained by physically removing a small portion (approximately 0.5 square inches or more) of the suspect material. The portion of the suspect material where the sample was to be collected was sprayed with Penewet®, a wetting agent and surfactant.

Following collection of the sample the broken edges of the pipe were sprayed with Fiberset® PM, a lockdown sealing treatment to prevent the release of residual fibers. Material Safety Data Sheets (MSDS) for Penewet® and Fiberset® are provided as Attachment D-3. All samples were assigned a unique sample number and logged into the field notebook, provided as Appendix B of the Transite Pipe Removal Action Plan, which included a brief description of the sampling area, GPS location, sampler identification, date of inspection, and a description of the material sampled. The following sample identification system was employed to identify each homogeneous sample group:

- Homogeneous area identification: The site was divided into seven Homogeneous areas (HA) numbered HA-1 through HA-7. The HAs are shown in Figures 2-1 through 2-5 of the Transite Pipe Removal Action Plan.
- Sample No: numbers assigned to represent the sequential sample collected for the specific homogeneous area.

Additional information recorded on the chain-of-custody included a description of the sample location,. The sample location was also noted on a field map. The Site plan showing the HAs and sample locations are included as Figures 2-1 through 2-5.

3.3 Asbestos Analytical Methods

Samples were delivered by Brown and Caldwell under proper chain-of-custody to Asbestos TEM Laboratories, Inc. located in Sparks, Nevada. TEM Laboratories is an asbestos testing laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP). All bulk samples submitted to the laboratory were analyzed for asbestos content by polarized light microscopy (PLM) using USEPA Test Method No. 600/R-93/116 (PLM with optical dispersion staining) in accordance with 40 CFR 763.86. The associated analytical test results are presented in Section 4.2.

3.4 ACM Assessment Methods

Determination of ACM is based on visual observations by certified inspectors and laboratory analysis of bulk samples. The visual observations are used to determine the ACM classification in accordance with NESHAP requirements [40 CFR § 61.145(c)]. The NESHAP classifications are defined as follows:

Category I, Non-Friable ACM – refers to asbestos-containing resilient floor coverings (vinyl asbestos floor tile), gaskets, packing and asphalt roofing materials containing greater than 1 percent asbestos, as determined using the PLM method specified in AHERA analytical protocols, 40 CFR 763. These materials are typically non-friable organically bound (NOB) materials. NOB materials are not friable and consist of fibers and other particulate matter embedded in a solid matrix of asphalt, vinyl or other organic substances. Removal of Category I (CAT I) ACM from a structure is only required prior to demolition, renovation, or repair if they are in poor condition, friable, or subject to sanding, cutting or abrading during demolition activities.

Category II, Non-Friable ACM – refers to any non-friable material, excluding CAT I non-friable ACM, containing more than 1 percent asbestos that when dry cannot be crumbled, pulverized or reduced to powder by hand pressure. Category II (CAT II) ACM may become regulated ACM (RACM) when demolition actions are applied to the materials.

Regulated ACM: (RACM)

1. Friable asbestos material (as defined by NESHAP), is any material containing more than 1 percent asbestos that when dry can be crumbled, pulverized or reduced to powder by hand pressure;
2. CAT I non-friable ACM that has become friable;
3. CAT I non-friable ACM that will be or has been subject to sanding, grinding, cutting or abrading; and
4. CAT II non-friable ACM that has a high probability of becoming or has become crumbled pulverized or reduced to a powder by forces expected to act on the material in the course of the demolition or renovation of the structure.

For each sample that laboratory analysis confirmed the presence of more than one percent asbestos, Brown and Caldwell evaluated the materials to determine their ACM classification. If any one of the samples within a HA was identified as ACM (see Table 4-2), then the entire HA was identified as ACM.

4. BULK SAMPLE ANALYSIS AND HOMOGENEOUS AREAS

4.1 Homogeneous Areas

Table 4-1 provides a listing of the HAs identified in the structure. The table includes the HA designation, a description of the material and the number of corresponding bulk samples collected for each HA. Figures 2-1 through 2-5 of the Transite Pipe Removal Action Plan show the areas sampled and the designations.

Table 4-1. Homogeneous Area List		
Homogeneous Area	Description	Number of Samples
HA-1	Cement pipe	6
HA-1	Black tar-coated metal pipe	3
HA-2	Cement pipe	10
HA-3	Cement pipe	7
HA-4	Cement pipe	9
HA-5	Cement pipe	7
HA-5	Black tar-coated metal pipe	2
HA-6	Cement pipe	3
HA-6	Black tar-coated metal pipe	3
HA-7	Cement pipe	7
HA-7	Black tar-coated metal pipe	3

4.2 Asbestos Sample Results

The final laboratory report of the asbestos results is provided in Appendix C of the Transite Pipe Removal Action Plan. Table 4-2 summarizes the sample results for the structure. Samples appearing in bold indicate samples containing greater than one percent asbestos by weight, which are considered ACM. Asbestos fibers may have been masked in the samples of asphaltic substrate material shown as non-detect and should be treated as asbestos containing.

Table 4-2. Laboratory Analytical Results				
Sample Number	Homogeneous Area	Material Description	Sample GPS Location	Asbestos Content
HA-1-01	HA-1	Cement pipe-grey	E329006.92 N1542250.999	10-20% Chrysotile 1-5% Crocidolite
HA-01-02	HA-1	Cement pipe-grey	E329101.302 N1542288.311	10-20% Chrysotile 1-5% Crocidolite

Table 4-2. Laboratory Analytical Results

Sample Number	Homogeneous Area	Material Description	Sample GPS Location	Asbestos Content
HA-01-03	HA-1	Cement pipe-grey	E329055.784 E1542125.175	10-20% Chrysotile 1-5% Crocidolite
HA-01-04	HA-1	Cement pipe-grey	E329118.585 N1542099.152	10-20% Chrysotile 1-5% Crocidolite
HA-01-05	HA-1	Cement pipe-tan	E329063.491 N1542120.316	20-30% Chrysotile
HA-01-06	HA-1	Cement pipe-tan	E329055.211 N1542120.161	20-30% Chrysotile
HA-01-08-MET	HA-1	Pipe coating - black	E328911.857 N1542339.298	None detected
HA-01-09-MET	HA-1	Pipe coating - black	E328908.845 N1542350.708	None detected
HA-01-10-MET	HA-1	Pipe coating - black	E328905.351 N1542335.465	None detected
HA-2-01	HA-2	Cement pipe-grey	E327108.805 N1545860.447	10-20% Chrysotile 5-10% Crocidolite
HA-2-02	HA-2	Cement pipe-grey	E327176.106 N1545949.562	10-20% Chrysotile 1-5% Crocidolite
HA-2-03	HA-2	Cement pipe-grey	E327784.781 N1546729.721	10-20% Chrysotile 5-10% Crocidolite
HA-2-04	HA-2	Cement pipe-grey	E327344.886 N1546996.278	10-20% Chrysotile 5-10% Crocidolite
HA-2-05	HA-2	Cement pipe-grey	E328230.597 N1546788.779	10-20% Chrysotile 5-10% Crocidolite
HA-2-06	HA-2	Cement pipe-grey	E328884.127 N1546149.593	10-20% Chrysotile 5-10% Crocidolite
HA-2-07	HA-2	Cement pipe-grey	E328695.84 N1545490.528	10-20% Chrysotile 5-10% Crocidolite
HA-2-08	HA-2	Cement pipe-grey	E328871.277 N1544874.794	10-20% Chrysotile 5-10% Crocidolite
HA-2-10	HA-2	Cement pipe-grey	E326486.187 N1546759.92	10-20% Chrysotile 5-10% Crocidolite
HA-2-11	HA-2	Cement pipe-tan	E326376.378 N1546615.642	10-20% Chrysotile 5-10% Crocidolite

Table 4-2. Laboratory Analytical Results

Sample Number	Homogeneous Area	Material Description	Sample GPS Location	Asbestos Content
HA-3-01	HA-3	Cement pipe-grey	E324761.177 N1546831.206	10-20% Chrysotile 5-10% Crocidolite
HA-3-01-FD	HA-3	Cement pipe-grey	E324540.833 N1547078.211	10-20% Chrysotile 5-10% Crocidolite
HA-3-02	HA-3	Cement pipe-tan	E324046.947 N1547449.082	10-20% Chrysotile 5-10% Crocidolite
HA-3-03	HA-3	Cement pipe-tan	E324111.153 N1547711.486	10-20% Chrysotile 1-5% Crocidolite
HA-3-04	HA-3	Cement pipe-grey	E324111.153 N1547711.486	10-20% Chrysotile 1-5% Crocidolite
HA-3-04-FD	HA-3	Cement pipe-grey	E324111.153 N1547711.486	10-20% Chrysotile 1-5% Crocidolite
HA-3-05	HA-3	Cement pipe-grey	E323479.892 N1547668.244	10-20% Chrysotile 1-5% Crocidolite
HA-4-01	HA-4	Cement pipe-grey	E324098.883 N1546938.888	10-20% Chrysotile 1-5% Crocidolite
HA-4-02	HA-4	Cement pipe-grey	E324093.237 N1546939.62	10-20% Chrysotile 1-5% Crocidolite
HA-4-02-FD	HA-4	Cement pipe-grey	E324093.237 N1546939.62	Not submitted
HA-4-03	HA-4	Cement pipe-brown	E323823.979 N1547188.094	10-20% Chrysotile 1-5% Crocidolite
HA-4-04	HA-4	Cement pipe-grey	E323916.196 N1546735.759	10-20% Chrysotile 1-5% Crocidolite
HA-4-05	HA-4	Cement pipe-grey	E324234.418 N1546835.543	10-20% Chrysotile 1-5% Crocidolite
HA-4-06	HA-4	Cement pipe-grey	E324114.28 N1546832.763	None detected
HA-4-07	HA-4	Cement pipe-grey	E324115.397 N1546832.238	None detected
HA-4-08	HA-4	Cement pipe-grey	E324133.908 N1546816.702	None detected

Table 4-2. Laboratory Analytical Results

Sample Number	Homogeneous Area	Material Description	Sample GPS Location	Asbestos Content
HA-5-01	HA-5	Cement pipe-grey	E323869.251 N1548797.411	20-30% Chrysotile 1-5% Crocidolite
HA-5-02	HA-5	Cement pipe-brown	E323968.924 N1549416.685	20-30% Chrysotile 1-5% Crocidolite
HA-5-02-FD	HA-5	Cement pipe-brown	E323968.924 N1549416.685	20-30% Chrysotile 1-5% Crocidolite
HA-5-03-MET	HA-5	Pipe coating - black	E323931.769 N1549350.438	None detected
HA-5-03-MET-FD	HA-5	Pipe coating - black	E323931.769 N1549350.438	None detected
HA-5-04	HA-5	Cement pipe-grey	E324312.711 N1548413.139	20-30% Chrysotile 1-5% Crocidolite
HA-5-04-FD	HA-5	Cement pipe-grey	E324312.711 N1548413.139	20-30% Chrysotile 1-5% Crocidolite
HA-5-05	HA-5	Cement pipe-brown	E324361.599 N1548165.228	20-30% Chrysotile 1-5% Crocidolite
HA-5-06	HA-5	Cement pipe-grey	E324419.488 N1548006.764	20-30% Chrysotile 1-5% Crocidolite
HA-6-01	HA-6	Cement pipe-grey	E324484.813 N1551573.676	20-30% Chrysotile 1-5% Crocidolite
HA-6-02	HA-6	Cement pipe-tan	E324669.21 N1551452.181	20-30% Chrysotile 1-5% Crocidolite
HA-6-03	HA-6	Cement pipe-grey	E324964.086 N1551133.719	20-30% Chrysotile 1-5% Crocidolite
HA-6-04-MET	HA-6	Pipe coating - black	E324148.205 N1551666.052	None detected
HA-6-05-MET	HA-6	Pipe coating - black	E324146.489 N1551653.237	30-40% Chrysotile
HA-6-06-MET	HA-6	Pipe coating - black	E324143.178 N1551537.475	30-40% Chrysotile
HA-7-01	HA-7	Cement pipe-red	E322829.939 N1554544.76	None detected
HA-7-02	HA-7	Cement pipe-grey	E323065.965 N1554544.557	20-30% Chrysotile 1-5% Crocidolite

Table 4-2. Laboratory Analytical Results

Sample Number	Homogeneous Area	Material Description	Sample GPS Location	Asbestos Content
HA-7-03	HA-7	Cement pipe-grey	E323082.676 N1554536.876	20-30% Chrysotile 1-5% Crocidolite
HA-7-04	HA-7	Cement pipe-grey	E322806.794 N1554561.673	20-30% Chrysotile 1-5% Crocidolite
HA-7-05	HA-7	Cement pipe-grey	E322591.054 N1554569.181	20-30% Chrysotile 1-5% Crocidolite
HA-7-06	HA-7	Cement pipe-grey	E322806.284 N1554550.019	20-30% Chrysotile 1-5% Crocidolite
HA-7-07	HA-7	Cement pipe-grey	E323078.091 N1554532.745	20-30% Chrysotile 1-5% Crocidolite
HA-7-08-MET	HA-7	Pipe coating - black	E322713.779 N1554613.561	None detected
HA-7-09-MET	HA-7	Pipe coating - black	E322722.794 N1554613.548	None detected
HA-7-10-MET	HA-7	Pipe coating - black	E322719.95 N1554614.591	None detected

* Asbestos results highlighted in **bold** are ACM.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 ACM Assessment Conclusions

Based on the results of the laboratory analyses, asbestos was found to be present in the intact cement and asphaltic wrapped pipe on site, and are classified as CAT II non-friable ACM. Each HA was visually identified and the approximate quantity estimated based on readily observable materials. The total estimated quantities were approximately 20,420 linear feet for cement pipe and 23 cubic yards of broken cement pipe and collars, as summarized in Table 5-1. The quantity estimates were based on the assessment of visible materials only and may not be inclusive of all ACM that may have been hidden and/or were inaccessible at the time of the inspection. Table 5-1 also presents applicable NESHAP classifications per § 40 CFR 61. Based on the CAS findings, the following conclusions can be reached:

- The cement pipe throughout the site is classified as CAT II non-friable ACM that may become regulated ACM (RACM) when demolition actions are applied to the materials. The disturbance of these materials during demolition is regulated under the NESHAP regulation and by OSHA.
- The asphaltic coated pipe throughout the site is classified as CAT II non-friable ACM that may become regulated ACM (RACM) when demolition actions are applied to the materials. The disturbance of these materials during demolition is regulated under the NESHAP regulation and by OSHA.
- The broken pieces of cement pipe and broken cement collars on the site are RACM. The disturbance of these materials during demolition is regulated under the NESHAP regulation and by OSHA.

Table 5-1. Asbestos Containing Material List

Homogeneous Area Number	Sample Description	NESHAP Classification	Estimated Quantity (linear feet.)	Estimated Quantity Broken Pipe/Collars (cubic yards)
HA-1	Cement pipe	CAT II	3,120	2
HA-1	Metal pipe	CAT II	100	0
HA=2	Cement pipe	CAT II	7,380	10
HA-2	Metal pipe	CAT II	100	0
HA-3	Cement pipe	CAT II	4,850	3
HA-3	Metal pipe	CAT II	0	0
HA-4	Cement pipe	CAT II	1,450	5
HA-4	Metal pipe	CAT II	0	0
HA-5	Cement pipe	CAT II	1,780	1

HA-5	Metal pipe	CAT II	200	0
HA-6	Cement pipe	CAT II	560	1
HA-6	Metal pipe	CAT II	500	0
HA-7	Cement pipe	CAT II	1,280	1
HA-7	Metal pipe	CAT II	200	0
Total for all HA	Cement pipe	CAT II	20,420	23
Total for all HA	Metal pipe	CAT II	1,100	0
Total for all HA	Broken pieces of pipe, broken collars	RACM	0	23
Site total	All pipe, broken pipe, and collars	CAT II	21,520	23

5.2 Recommendations

Based on the CAS findings and conclusions reached, Brown and Caldwell recommends the following:

- A NESHAP notification form should be completed for the demolition activities. The Asbestos Abatement Project Notification Form (NESHAP form) should be completed by the abatement contractor and submitted to Nevada Division of Industrial Relations, Occupational Safety and Health Administration, Northern District Office in accordance with the regulatory requirements. The ACM is to be handled, removed and disposed in accordance with § 61.140 et seq. during demolition.
- The disturbance of ACM by demolition and/or abatement activities is classified by OSHA as Class II asbestos work and will require compliance with applicable sections of § 29 CFR 1926.1101 (certified competent person and asbestos worker required).
- The intact cement and asphaltic coated pipe on the site should be sprayed with amended water and an encapsulant prior to transportation to the proposed onsite landfill.
- Broken pieces of cement pipe and broken cement collars should be sprayed with amended water, encapsulated and placed in bags prior to transportation to the proposed onsite landfill. A licensed asbestos abatement contractor should be retained to perform the abatement of the ACM in accordance with § 61.140 et seq. and § 29 CFR 1926.1101 et seq.
- A Negative Exposure Assessment to assess the possible release of asbestos fibers during abatement is conducted by a Certified Industrial Hygienist.

ATTACHMENT D-1

AHERA Certification

THE ASBESTOS INSTITUTE

Certifies that

Roe E Souther

has attended the EPA approved course

**AHERA Refresher
Contractor/Supervisor
June 4, 2009**

and successfully passed the competency exam.

Date of Examination: **June 4, 2009**

Date of Expiration: **June 4, 2010**



Director



Approved Instructor

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THE ASBESTOS INSTITUTE

Certifies that

Roe E Souther

has attended the EPA approved course

**AHERA Refresher
Building Inspector
June 5, 2009**

and successfully passed the competency exam.

Date of Examination: **June 5, 2009**

Date of Expiration: **June 5, 2010**



Director



Approved Instructor

THE ASBESTOS INSTITUTE

8102 North 23rd Avenue

Suite A

Phoenix, AZ 85021-4962

602-864-6564

This training meets all requirements for asbestos accreditation under TSCA Title II.

THE ASBESTOS INSTITUTE

Certifies that

Roe E Souther

has attended the EPA approved course

**AHERA Refresher
Management Planner
June 5, 2009**

and successfully passed the competency exam.

Date of Examination: **June 5, 2009**

Date of Expiration: **June 5, 2010**



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ATTACHMENT D-2

State of Nevada Consultant's License

STATE OF NEVADA
DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ASBESTOS CONTROL PROGRAM

DATE 9/14/09

LICENSE IJM14789

THE ASBESTOS ABATEMENT CONSULTANT NAMED BELOW IS LICENSED UNDER THE
PROVISIONS OF CHAPTER 618 OF N.R.S. AND N.A.C. THIS LICENSE EXPIRES ON 9/14/10

ROY E. SOUTHER
BROWN AND CALDWELL
3264 GONI ROAD, SUITE 153
CARSON CITY, NV 89706

DATE 9/14/09
LICENSE NO. IJM1489
INSPECTOR
MANAGEMENT PLANNER
PROJECT MONITOR

Signature

[Wallet Card — Fold Here]

STATE OF NEVADA
DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

ASBESTOS ABATEMENT CONSULTANT
ROE E. SOUTHER
BROWN AND CALDWELL

HAS PAID FEE REQUIRED BY

CHAPTER 618 OF NAC

THIS LICENSE EXPIRES ON 9/14/10

(NSPO Rev. 2-06)

(O) 3656

ATTACHMENT D-3

Material Safety Data Sheets

PRODUCT DATA

PENEWET®

DESCRIPTION

Product No.: 6450 clear

Penewet is an ready-to-use, colorless wetting agent/surfactant solution incorporating advanced concepts in surface chemistry. It provides powerful wetting, penetrating and coalescing of asbestos containing materials (ACM) to permit handling and removal of these materials under damp, dust-free conditions. Penewet is a nonflammable water based nontoxic liquid which will not corrode aluminum components of spray equipment.

PROPERTIES

- Solids by Weight: 10 +/-2%
- Volatile: Water
- Average particle size: 0.2 microns
- Viscosity @ 77°F: 50-55 Krebs Units
- Weight per gallon @ 77°F: 8.8 lbs.
- Ionic nature: Non-ionic
- Flammability: Non-flammable
- Phosphate free?: Yes
- Surface tension: 31 dynes/cm.
- Coverage: 500 sq.ft./gal.
- Shelf Life: @ 77°F, 36 months minimum, (in original factory sealed containers).
- Odor: Applied indoors, virtually odorless.
- Packaged: 5, and 55 gallon containers

APPLICATION INFORMATION

SURFACTANT/WETTING AGENT: Penewet is a ready-to-use formulaiton. Sealing microscopic residual fibers after asbestos removal is mandatory on every project. Prior to post-removal air monitoring, apply one coat to all exposed surfaces prior to post removal air monitoring.

PULLDOWN BY MISTING: Pulldown by misting the contaminated air is an effective technique prior to post removal air-monitoring. To pull down free-floating asbestos fibers effectively, stand in the center of the room and hold the spray gun as close to the ceiling as possible. A mist should be sprayed parallel to the ceiling in every direction or in a circle. Apply one coat to the polyethylene walls and floor.

(Over)



FIBERLOCK TECHNOLOGIES, INC.

150 Dascomb Road
Andover, MA 01810 U.S.A.
Toll Free: (800) 342-3755
Tel.: (978) 623-9987 Fax: (978) 475-6205
www.fiberlock.com

APPLICATION PROCEDURES FOR PENEWET ASBESTOS WETTING COMPOUND

PREPARATION

Prior to application, stir thoroughly to achieve a uniform consistency. Penewet is pre-mixed, water addition is not necessary.

APPLICATION EQUIPMENT

Professional models of all brands of spray equipment can be used to successfully apply Penewet. Use the settings below when applying Penewet:

Pressure: 2500-2700 psi
Hose length: 100 feet
Hose diameter: 1/4 inch
Tip size: .015 - .027 (orifice size)
Fan size: 12 inches

CLEAN UP

Tools and drippings should be cleaned with soap and water before coating dries.

SHIPPING AND STORAGE INFORMATION

Shelf Life: 3 years in sealed containers

Storage Temperature: Keep from freezing. Store in a dry place at temperatures between 40°F - 100°F

Flash Point: None.

**KEEP OUT OF REACH OF CHILDREN
FOR PROFESSIONAL USE ONLY
KEEP FROM FREEZING**

Cautions: Approved respirators must be used to prevent inhalation of asbestos fibers that may be present in the air. Protective clothing should be worn. Tools and drippings should be cleaned immediately with clean, soapy water before the coating dries. Careful consideration should be given to all Environmental Protection Agency (EPA), OSHA and state regulations in effect at the time of application of Penewet. The EPA, through the Office of Pesticides and Toxic Substances has issued reports headed "Guidance for Controlling Friable Asbestos-Containing Materials in Buildings," EPA 560/5 85-024, June 1985, and "Managing Asbestos in Place, A Building Owner's Guide to Operations and Maintenance Programs for Asbestos Containing Materials," 20T-2003, July 1990, containing the proper data, cautions, and procedures for asbestos control. Copies are available from the Environmental Assistance Division, TS-799, TSCA Assistance Information Service, U.S. EPA, 401 M Street SW, Washington, DC 20460, (202) 554-1404.

Keep from freezing. Do not store at temperatures above 100°F.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of this product are beyond our control. Neither Fiberlock Technologies, Inc., nor our agents shall be responsible for the use or results of use of this product or any procedures or apparatus mentioned. We recommend that the prospective user determine the suitability of Penewet for each specific project and for the health and safety of personnel working in the area.

MATERIAL SAFETY DATA SHEET

(Essentially similar to OSHA form 174, Sept. 1985 - For Compliance with OSHA's Hazard Communication Standard, 29CFR 1910.1200)

Section I - Product Identity:

Penewet® (6450)

Manufacturer's Name:
Fiberlock Technologies, Inc.
150 Dascomb Road
Andover, MA 01810

Date of Preparation: September 15, 2002
Information Telephone Number: (978) 623-9987
Emergency Telephone Numbers:
Weekdays: (978) 623-9987
After hours, weekends & holidays: (978) 887-5926, or
"CHEM-TEL" Emergency Contact Number: (800) 255-3924

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENT	COMMON NAME(S)	%	CAS. NO.	OSHA PEL	OR	ACGIH TLV
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None per the limits for reporting set forth in 29CFR 1910.1200

Section III - Physical/Chemical Characteristics

Boiling Points of Major Constituent: (Water)	212°F	Specific Gravity (H ₂ O=1) Wgt./gal.	1.01
Vapor Pressure (mm Hg) @ 68°F	N/D	Melting Point Water (Ice)	32°F
Vapor Density (AIR=1) Heavier Lighter	N/D	Evaporation Rate (Butyl Acetate=1)	Slower
Solubility in Water	Complete	Appearance: Clear solution Odor: Odorless	

Section IV - Fire and Explosion Hazard Data (Nonflammable)

Flash Point: None	Flammable Limits: LEL: N/A UEL: N/A	DOT Hazard Class: Not Regulated	Marking: "Keep From Freezing"
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Special Firefighting Properties: N/A Unusual Fire Explosion: N/A

Section V - Reactivity Data

Hazardous Polymerization: Won't occur Stability: Stable Incompatibility: N/A

Hazardous Decomposition: N/A Conditions to Avoid: N/A

Section VI - Health Hazard Data, Toxicity Data

Route(s) of Entry: None for skin, inhalation and ingestion.

Carcinogenicity NTP: No IARC Monographs: No OSHA Regulated: No Signs Symptoms: N/A

Health Hazards (Acute and Chronic): N/A Medical Conditions: N/A

EMERGENCY AND FIRST AID PROCEDURES: Eyes: Flush with water. Skin: Wash with soap/water. Remove contaminated clothing.
Ingestion: Induce vomiting. Seek immediate medical attention. Inhalation: Remove to fresh air.

SUPPLEMENTAL INFORMATION

To comply with New Jersey DOH Right-To-Know labeling law
(N.J.A.C. 8:59 - 5.1 & 5.2)

CAS. No.:
7732-18-5
68131-39-5
64-02-8
Not Avail.*
Not Avail.*
Contents partially unknown

CHEMICAL INGREDIENTS:
Water
Alcohol ethoxylate
Tetrasodium EDTA
Alkoxylated linear alcohol
Hydroxyethyl cellulose

HMIS HAZARD RATING			
Health 1	Flammability 0	Reactivity 0	Personal Protection A
HAZARD INDEX: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe			
PERSONAL PROTECTION CODE			
A=Safety Glasses			

Section VII: Precautions for Safe Handling and Use

IN CASE MATERIAL IS RELEASED OR SPILLED: Flush area with water. Mop up and hold for disposal.

WASTE DISPOSAL METHOD: Any method in accordance with local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container sealed when not in use. Do not store at elevated temperatures.

OTHER PRECAUTIONS: Eye protection recommended.

Ventilation: N/A

Section VIII: Control Measures

RESPIRATORY PROTECTION: None needed

PROTECTIVE GLOVES: N/A

EYE PROTECTION: Use safety eyewear including side shields, face shields, or chemical splash goggles (ANSI Z-87.1 or approved equivalent).

OTHER PROTECTIVE EQUIPMENT: N/A

WORK HYGIENIC: N/A



PROPERTIES

COLOR:

32-60 Blue

32-61 Clear

TYPE: Copolymer

VOLATILE: Water

AVERAGE WEIGHT/U.S. GALLON (ASTM D 1475):

8.4 lbs. (1.01 kg/l)

APPLICATION METHOD:

High Pressure or Low Pressure Airless Spray

COVERAGE:

(Subject to the nature of the material being removed.
Varies with the matrix absorbency, density, and thickness.)

REMOVAL — Saturation to substrate in 1 coat — 3 1/2 gallons per 100 board feet, theoretical. Actual required quantities to be determined by application to the intended ACM.

POST REMOVAL RESIDUAL FIBER ENCAPSULATION 100 to 400 sq. ft./gal., (2.45 to 9.82 m²/l), dependent upon the absorptivity of the intended substrate.

ODOR: Wet—Mild Dry—None

SURFACE TENSION: (ASDM D 1331)

29.6 dynes/cm

WET FLAMMABILITY (ASTM D 3278):

No flash to boiling 210°F (98.9°C)

SURFACE BURNING CHARACTERISTICS (ASTM E 84):

Flame Spread: 7.0

Smoke Developed: 0.0

Applied to 1/4 inch (6.4mm) inorganic reinforced cement board at a coverage rate of 1/2 gallon per 100 sq. ft. (0.20 l/m²). The flame spread may vary at different product thickness and/or when applied over other surfaces.

ASBESTOS REMOVAL ENCAPSULANT is capable of being diluted to a maximum ratio of 4 parts water to 1 part REMOVAL ENCAPSULANT. For limitations on dilution, see application guide.

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Visit us on the web at www.fosterproducts.com

FOSTER ASBESTOS REMOVAL ENCAPSULANT AND POST-REMOVAL RESIDUAL ENCAPSULANT



FOSTER ASBESTOS REMOVAL ENCAPSULANT is a polymeric, water-based coating. It penetrates and “wets-out” all types of asbestos quickly and thoroughly, including AMOSITE and CROCIDOLITE. As it penetrates through the ACM, it absorbs onto the individual fibers to lock them together, reducing the possibility of loose fibers from becoming airborne during the removal process. Creating an aerosol atmosphere during its initial application allows the atomized material to attach itself to, and “wet-out”, pre-existing airborne fibers, providing improved air quality during the removal operation. These now weighted fibers collect on the containment structure. If allowed to dry they become adhered, reducing the possibility of reintroduction, and reducing the high cost of the labor-intensive final clean-up.

ASBESTOS REMOVAL ENCAPSULANT, when used full strength (undiluted), makes an excellent post-removal, residual encapsulant. Testing at Underwriters Laboratories, Inc., in conjunction with W. R. Grace Company's Retro-Guard and Type 106, and Strong-Lite Products Corp. FP-2B, resulted in UL Classification of the system. See the UL Fire Resistance directory for complete information.

United States Patent Number 4,866,105 and 5,034,247 and 5,317,056. Canadian Patent Number 1,339,293.

LIMITATIONS

Do not store over 100°F (38°C). Do not apply below 32°F (0°C) or to surfaces operating at, or intended to operate in excess of 250°F (121°C). Protect from freezing until dry.

ENCAPSULANT MATERIALS CLASSIFIED BY UNDERWRITERS LABORATORIES, INC. AS TO FIRE RESISTANCE FOR APPLICATION TO CLASSIFIED SPRAYED FIBER AND/OR CEMENTITIOUS MIXTURES. ABILITY OF THIS MATERIAL TO ACT AS A SEALANT HAS NOT BEEN INVESTIGATED. SEE UL FIRE RESISTANCE DIRECTORY.

See other side for specifications and application information.

APPLICATION GUIDE FOR FOSTER ASBESTOS REMOVAL ENCAPSULANT 32-60 / 32-61

MATERIAL PREPARATION

Stir well but do not use sticks, boards, or anything else that would splinter or otherwise contaminate the product. If 32-60 is to be diluted for the removal of asbestos containing materials, insure that the dilution vehicle and the mixing container are free of any contaminants that could in any way impair the performance of the resultant mixture or the spray equipment.

SITE PREPARATION

As a minimum, follow all procedures outlined by Federal, State, and Local Authorities regulating asbestos abatement projects and the wastes generated therein.

APPLICATION

FOR REMOVAL OF ACM: Using appropriate spray apparatus, apply 32-60 directly to the ACM in sufficient quantity to thoroughly wet-out the matrix to the substrate. The quantity of material required to achieve total saturation is a variable dependent on the thickness and absorptivity of a given matrix. During the wetting out process, randomly core the treated matrix to insure that penetration to substrate has been achieved. Proper application will allow the abatement contractor 12 hours to remove the treated insulation. If allowed to dry prior to removal, the insoluble nature of the cured removal encapsulant will retard attempts to re-wet the treated insulation.

IMPORTANT NOTE: In some instances, dependent upon the composition and nature of the ACM being removed, the penetrating capabilities of 32-60 can be enhanced by dilution with water. Should a decision be made to dilute 32-60, we require the contractor to evaluate several different ratios of water to 32-60, arriving at the highest concentrated level of 32-60 that, in the contractor's judgment, provides optimum removal efficiency. In no case should the dilution ratio exceed 4 parts water to 1 part 32-60. **THE DILUTED 32-60 MAY BE USED IN THE WETTING-OUT PORTION OF THE REMOVAL PROJECT ONLY.** Though this may facilitate easier removal, a strong word of caution must be advised. **THE GREATER THE DILUTION OF 32-60, THE MORE POST-REMOVAL ENCAPSULATION PROPERTIES OF THE REMOVED ACM WILL BE DIMINISHED.**

FOR POST REMOVAL ENCAPSULATION (LOCKDOWN): Upon completion of the removal procedure, mist spray the exposed substrate with Foster Asbestos Removal Encapsulant 32-60 to residually encapsulate fibers unremovable in the abatement process. **WHEN USED AS A POST-REMOVAL RESIDUAL ENCAPSULANT (OR "LOCKDOWN"), 32-60 MUST BE APPLIED AT FULL STRENGTH. NO DILUTION OF 32-60 IS ALLOWED WHEN USED IN THIS MANNER.** Must allow 24 hours minimum dry time before overcoating.

FLOORS

32-60/61 is not suggested as a floor traffic coating. It may be used on floors provided that a new floor surfacing material is installed over it. Flooring installers must determine by their own tests that any mastic, adhesive or cement they plan on using is compatible with, and bonds firmly to, the dried 32-60/61.

SPRAY EQUIPMENT

Foster Asbestos Removal Encapsulant can be applied with virtually any type of airless equipment on the market today that is capable of spraying water base paint. Electric airless sprayers are most commonly used. Pressure settings should be set as low as possible while still achieving atomization. **AVERAGE VISCOSITY RANGE: 10-50 cps.**

CLEAN UP

Use fresh water to clean equipment before the product dries. Dry product may be removed with hot soapy water or strong solvents such as chlorinated solvent (non-flammable) or xylol (flammable).



CUSTOMER SERVICE—800-231-9541 OR 800-338-2975

IMPORTANT: Specialty Construction Brands, Inc. warrants that each of its products will be manufactured in accordance with the specifications in effect on the date of manufacture. **WE MAKE NO OTHER WARRANTIES AND EXPRESSLY DISCLAIM ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. **OUR ACCEPTANCE OF ANY ORDERS FOR THE PRODUCT IS EXPRESSLY CONDITIONAL UPON PURCHASER'S ASSENT TO THE TERMS ON THE APPLICABLE INVOICE.**

ADEQUATE TESTS: The information contained herein we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be performed by you to determine if this product meets all of your requirements. The warranted shelf life of our products is six months from date of shipment to the original purchaser.

**For industrial use only. Keep out of reach of children.
Consult Material Safety Data Sheet and container label for further information.**

DSF32-60/32-61

MATERIAL SAFETY DATA SHEET

REVISION DATE: 05-13-2005

SUPERSEDES: 12-09-2003

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

Specialty Construction Brands, Inc.
(formerly Foster Products Corporation
an H.B. Fuller Company Subsidiary)
315 South Hicks Road
Palatine, IL 60067
Phone: 847-358-9500

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 802290PM
PRODUCT NUMBER: FD3260
PRODUCT NAME: FOSTER 32-60
PRODUCT DESCRIPTION: Lockdown

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
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SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: No irritation hazard in normal industrial use.

SKIN: No irritation hazard in normal industrial use.

INHALATION: No irritation hazard in normal industrial use.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): No organs known to be damaged from exposure to this product.

MATERIAL SAFETY DATA SHEET

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: No medical conditions affected by exposure.

SECTION 4: FIRST AID MEASURES

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.

IF ON SKIN: Wash with soap and water.

IF VAPORS INHALED: Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.

IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.
CLEAN-UP:	Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity.

This product contains an ingredient that may release formaldehyde at heated cure temperatures.

Storage: Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

MATERIAL SAFETY DATA SHEET

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

GLOVES: Not normally required. Use nitrile gloves if conditions warrant.

RESPIRATORY PROTECTION: No respiratory protection required under normal conditions of use. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: No exposure limits exist for the constituents of this product. No engineering controls are likely to be required to maintain operator comfort under normal conditions of use.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Blue

ODOR: Sweet Mild

ODOR THRESHOLD: Not established

WEIGHT PER GALLON (lbs.): 8.4

SPECIFIC GRAVITY: 1.01

SOLIDS (% by weight): 7.5

pH: Not established

BOILING POINT (deg. C): Not established

FREEZING/MELTING POINT (deg. C): Not established

VAPOR PRESSURE (mm Hg): Not established

VAPOR DENSITY: Not established

EVAPORATION RATE: Not established

OCTANOL/WATER COEFFICIENT: Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITY: Not established

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
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TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

125.6 g VOC/liter of material, less water and exempt solvents

MATERIAL SAFETY DATA SHEET

(VOC theoretically determined using EPA Reference method 24)

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED ,,,

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: This product is in compliance with the Canadian Domestic Substance List requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 72. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
---------------	------	---

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

STATE REPORTING

This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

MATERIAL SAFETY DATA SHEET

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to Specialty Construction Brands, Inc. from its suppliers, and because Specialty Construction Brands, Inc. has no control over the conditions of handling and use, Specialty Construction Brands, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and Specialty Construction Brands, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of Specialty Construction Brands, Inc. products to comply with all applicable federal, state and local laws and regulations.